

09/743,054

WEST Search History

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DATE: Thursday, August 19, 2004

Hide?	Set Name	Query	Hit Count
		<i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR</i>	
<input type="checkbox"/>	L8	L7 and (venom\$ or apamin\$ or tertiapin\$ or degranulating)	2
<input type="checkbox"/>	L7	L6 and lu	44
<input type="checkbox"/>	L6	(trustees)near5(pennsylvania or pa)	837
<input type="checkbox"/>	L5	(tertiapin\$)	10
<input type="checkbox"/>	L4	(tertiapin\$)near3(derivativ\$ or analog\$ or modified or modify or mutate\$ or mutant\$)	1
<input type="checkbox"/>	L3	(tertiapin\$ or apamin\$).ti.	13
<input type="checkbox"/>	L2	l1 and (tertiapin\$)near3(derivativ\$ or analog\$ or modified or modify or mutate\$ or mutant\$)	1
<input type="checkbox"/>	L1	lu and (tertiapin\$ or apamin? or bee or venom\$)	11905

END OF SEARCH HISTORY

09/743,054

(FILE 'HOME' ENTERED AT 10:12:43 ON 19 AUG 2004)

FILE 'REGISTRY' ENTERED AT 10:13:02 ON 19 AUG 2004

L1 2 S ALCNCNRIIPHQCWKKCGKK/SQSP seq 2

FILE 'CAPLUS, TOXCENTER, USPATFULL' ENTERED AT 10:14:20 ON 19 AUG 2004

L2 6 S L1

L3 4 DUP REM L2 (2 DUPLICATES REMOVED)

FILE 'STNGUIDE' ENTERED AT 10:17:41 ON 19 AUG 2004

FILE 'REGISTRY' ENTERED AT 10:20:24 ON 19 AUG 2004

L4 4 S ALCNCNRIIPHMCWKKCGKK/SQSP seq 1

FILE 'AGRICOLA, BIOSIS, CA, CANCERLIT, CAPLUS, CHEMCATS, MEDLINE, TOXCENTER, USPATFULL' ENTERED AT 10:22:16 ON 19 AUG 2004

L5 133 S L4

L6 0 S L5 AND PHARMACEUTICAL?

L7 5 S L5 AND TREAT?

L8 3 DUP REM L7 (2 DUPLICATES REMOVED)

L9 13 S L5 AND (DERIVATIVE? OR ANALOG? OR MODIFY OR MODIFIED OR MUTA

L10 5 DUP REM L9 (8 DUPLICATES REMOVED)

FILE 'CAPLUS, EMBASE, BIOSIS, MEDLINE, WPIDS' ENTERED AT 10:26:10 ON 19 AUG 2004

L11 1 S TERTIAPIN? AND PHARMACEUTICAL?

L12 59 S APAMIN? AND PHARMACEUTICAL?

L13 3 S (APAMIN?) (23A) (PHARMACEUTICAL?)

L14 4 S (APAMIN?) (50A) (PHARMACEUTICAL?)

L15 1 S L14 NOT L13

L16 55 S (TERTIAPIN?) AND PHARM?

L17 35 DUP REM L16 (20 DUPLICATES REMOVED)

L18 10 S L17 AND (TERTIAPIN?)/TI

L19 1405 S (APAMIN?)/TI

L20 495 S L19 AND PHARM?

L21 7 S L19 AND PHARMACEUT?

L22 7 DUP REM L21 (0 DUPLICATES REMOVED)

L23 4 S G1RK?

L24 564 S ROMK1?

L25 ~~184 S L24 AND INHIBIT?~~

L26 0 S L25 AND PHARMACEUT?

L27 11 S L25 AND PEPTID?

L28 8 DUP REM L27 (3 DUPLICATES REMOVED)

FILE 'STNGUIDE' ENTERED AT 10:38:04 ON 19 AUG 2004

FILE 'CAPLUS, EMBASE, BIOSIS, MEDLINE, WPIDS' ENTERED AT 10:42:19 ON 19 AUG 2004

L29 1367 S (APAMIN)/TI

L30 97 S L29 AND (BEE)/TI

L31 93 S L30 AND (VENOM)/TI

L32 26 S L31 AND (PEPTIDE?)/TI

L33 9 DUP REM L32 (17 DUPLICATES REMOVED)

FILE 'STNGUIDE' ENTERED AT 10:47:25 ON 19 AUG 2004

FILE 'CAPLUS, EMBASE, BIOSIS, MEDLINE, WPIDS' ENTERED AT 10:49:05 ON 19 AUG 2004

L34 2838 S (MELITTIN)/TI

L35 6 S L34 AND PHARMACEUTICAL?

L36 6 DUP REM L35 (0 DUPLICATES REMOVED)

L37 10113 S (LU, Z? OR LU Z?)/AU,IN

L38 46 S L37 AND VENOM?

L39

24 DUP REM L38 (22 DUPLICATES REMOVED)

=>

- (32) Mackinnon, R; J Gen Physiol 1988, V91, P335 CAPLUS
- (33) Mackinnon, R; Neuron 1990, V5, P767 CAPLUS
- (34) Mackinnon, R; Science 1989, V245, P1382 CAPLUS
- (35) Mackinnon, R; Science 1998, V280, P106 CAPLUS
- (36) Matsuda, H; Nature 1987, V325, P156 MEDLINE
- (37) Miller, C; Neuron 1988, V1, P1003 CAPLUS
- (38) Naranjo, D; Neuron 1996, V16, P123 CAPLUS
- (39) Ovchinnikov, Y; Bioorg Khim 1980, V6, P359 CAPLUS
- (40) Park, C; Neuron 1992, V9, P307 CAPLUS
- (41) Pease, J; Biochemistry 1988, V27, P8491 CAPLUS
- (42) Pfaffinger, P; Nature 1985, V317, P536 CAPLUS
- (43) Ranganathan, R; Neuron 1996, V16, P131
- (44) Reuveny, E; Nature 1994, V370, P143 CAPLUS
- (45) Silverman, S; J Biol Chem 1996, V271, P30524 CAPLUS
- (46) Stampe, P; Biochemistry 1994, V33, P443 CAPLUS
- (47) Stocker, M; Proc Natl Acad Sci U S A 1994, V91, P9509 CAPLUS
- (48) Stuhmer, W; EMBO J 1989, V8, P3235 MEDLINE
- (49) Tucker, S; Am J Physiol 1996, V271, PH379 CAPLUS
- (50) Vandenberg, C; Proc Natl Acad Sci U S A 1987, V84, P2560 CAPLUS
- (51) Wible, B; Nature 1994, V371, P246 CAPLUS
- (52) Wickman, K; Nature 1994, V368, P255 CAPLUS
- (53) Xu, X; Protein:Struct, Funct, Genet 1993, V17, P124 CAPLUS

=>

(composition; tertiapin is a novel high-affinity **inhibitor** for inward-rectifier K⁺ channels)

IT Potassium channel
 RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); PROC (Process)
 (inward-rectifier, GIRK1/4 and **ROMK1**; tertiapin is a novel high-affinity **inhibitor** for inward-rectifier K⁺ channels)

IT Honeybee
 Venoms
 (purification of tertiapin from honeybee venom; tertiapin is a novel high-affinity **inhibitor** for inward-rectifier K⁺ channels)

IT Molecular association
 (tertiapin is a novel high-affinity **inhibitor** for inward-rectifier K⁺ channels)

IT 24345-16-2, Apamin 83856-13-7, Mast cell degranulating **peptide**
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
 (comparison; tertiapin is a novel high-affinity **inhibitor** for inward-rectifier K⁺ channels)

IT 63-68-3, L-Methionine, biological studies
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
 (functional role of residue Met13; tertiapin is a novel high-affinity **inhibitor** for inward-rectifier K⁺ channels)

IT 58694-52-3P, Tertiapin
 RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation); PROC (Process)
 (tertiapin is a novel high-affinity **inhibitor** for inward-rectifier K⁺ channels)

RE.CNT 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE

- (1) Aiyar, J; Neuron 1995, V15, P1169 CAPLUS
- (2) Blatz, A; Nature 1986, V323, P718 CAPLUS
- (3) Breitweiser, G; Nature 1985, V317, P538
- (4) Corey, S; J Biol Chem 1998, V273, P5271 CAPLUS
- (5) Dascal, N; Proc Natl Acad Sci U S A 1993, V90, P10235 CAPLUS
- (6) Doyle, D; Science 1998, V280, P69 CAPLUS
- (7) Escobar, L; Biochemistry 1993, V32, P6982 CAPLUS
- (8) Fakler, B; Cell 1995, V80, P149 CAPLUS
- (9) Fakler, B; Neuron 1994, V13, P1413 CAPLUS
- (10) Ficker, E; Science 1994, V266, P1068 CAPLUS
- (11) Gaudie, J; Eur Biochem 1976, V61, P369 CAPLUS
- (12) Goldstein, S; Neuron 1994, V12, P1377 CAPLUS
- (13) Gross, A; Neuron 1994, V13, P961 CAPLUS
- (14) Gross, A; Neuron 1996, V16, P399 CAPLUS
- (15) Heginbotham, L; Biophys J 1994, V66, P1061 CAPLUS
- (16) Heginbotham, L; Science 1992, V258, P942
- (17) Hidalgo, P; Science 1995, V268, P307 CAPLUS
- (18) Hille, B; Ionic channels of excitable membranes 1991
- (19) Ho, K; Nature 1993, V362, P127
- (20) Horie, M; J Physiol 1987, V387, P251 CAPLUS
- (21) Huang, C; Nature 1988, V391, P803
- (22) Inagaki, N; Science 1995, V270, P1166 CAPLUS
- (23) Katz, B; Arch Sci Physiol 1949, V2, P285
- (24) Krapivinsky, G; Nature 1995, V374, P135 CAPLUS
- (25) Kubo, Y; Nature 1993, V362, P127 CAPLUS
- (26) Kubo, Y; Nature 1993, V364, P802 CAPLUS
- (27) Logothetis, D; Nature 1987, V325, P321
- (28) Lopatin, A; Nature 1994, V372, P366 CAPLUS
- (29) Lu, Z; Biochemistry 1997, V36, P6936 CAPLUS
- (30) Lu, Z; Nature 1994, V371, P243 CAPLUS
- (31) Lucchesi, K; J Membr Biol 1989, V109, P269 CAPLUS

ORGN Classifier
 Enterobacteriaceae 06702
 Super Taxa
 Facultatively Anaerobic Gram-Negative Rods; Eubacteria; Bacteria;
 Microorganisms
 Organism Name
 Escherichia-coli
 Taxa Notes
 Bacteria, Eubacteria, Microorganisms
 ORGN Classifier
 Salientia 85306
 Super Taxa
 Amphibia; Vertebrata; Chordata; Animalia
 Organism Name
 Xenopus-laevis
 Taxa Notes
 Amphibians, Animals, Chordates, Nonhuman Vertebrates, Vertebrates
 ORGN Classifier
 Serpentes 85410
 Super Taxa
 Reptilia; Vertebrata; Chordata; Animalia
 Organism Name
 Dendroaspis-angusticeps
 Taxa Notes
 Animals, Chordates, Nonhuman Vertebrates, Reptiles, Vertebrates
 RN 7440-09-7 (POTASSIUM)
 8016-13-5 (PROMEGA)
 83453-41-2 (MONOS)

=> d 5 all

L28 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
 AN 1998:556295 CAPLUS
 DN 129:272022
 ED Entered STN: 02 Sep 1998
 TI A Novel High-Affinity **Inhibitor** for Inward-Rectifier K⁺ Channels
 AU Jin, Weili; Lu, Zhe
 CS Department of Physiology, University of Pennsylvania, Philadelphia, PA,
 19104, USA
 SO Biochemistry (1998), 37(38), 13291-13299
 CODEN: BICHAW; ISSN: 0006-2960
 PB American Chemical Society
 DT Journal
 LA English
 CC 6-3 (General Biochemistry)
 AB Inward-rectifier K⁺ channels are a group of highly specialized K⁺ channels
 that accomplish a variety of important biol. tasks. Inward-rectifier K⁺
 channels differ from voltage-activated K⁺ channels not only functionally
 but also structurally. Each of the four subunits of the inward-rectifier
 K⁺ channels has only two instead of six transmembrane segments compared to
 the voltage-activated K⁺ channels. Thus far, there are no high-affinity
 ligands that directly target any inward-rectifier K⁺ channel. In the
 present study, we identified, purified, and synthesized a protein
 inhibitor of the inward-rectifier K⁺ channels. The
 inhibitor, called tertiapin, blocks a G-protein-gated channel
 (GIRK1/4) and the **ROMK1** channel with nanomolar affinities, but a
 closely related channel, IRK1, is insensitive to tertiapin. Mutagenesis
 studies show that tertiapin **inhibits** the channel by binding to
 the external end of the ion conduction pore.
 ST tertiapin **inhibitor** inward rectifier potassium channel
 IT Amino acids, biological studies
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified);
 BIOL (Biological study); OCCU (Occurrence)

L28 ANSWER 4 OF 8 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 1998:518914 BIOSIS
 DN PREV199800518914
 TI A snake toxin **inhibitor** of inward rectifier potassium channel
ROMK1.
 AU Imredy, John P.; Chen, Chinfei; Mackinnon, Roderick [Reprint author]
 CS Box 47, 1230 York Ave., New York, NY 10021, USA
 SO Biochemistry, (Oct. 20, 1998) Vol. 37, No. 42, pp. 14867-14874. print.
 CODEN: BICHAW. ISSN: 0006-2960.
 DT Article
 LA English
 ED Entered STN: 18 Dec 1998
 Last Updated on STN: 10 May 1999
 AB Mamba snake dendrotoxins have been used extensively in biochemical and
 physiological studies of K⁺ channels of the brain. Their known targets of
inhibition have been limited to the family of voltagegated K⁺
 channels. We report the isolation of a dendrotoxin **inhibitor** of
ROMK1, a channel belonging to the inward rectifier family of K⁺
 channels. The **inhibitory** activity, fractionated to purity with
 FPLC and HPLC, is identical to a previously identified 6-dendrotoxin. To
 verify that 6-dendrotoxin blocks **ROMK1** channels, a cDNA encoding
 the toxin was synthesized and recombinant toxin expressed in Escherichia
 coli. Electrophysiological recordings reveal that recombinant
 6-dendrotoxin has a half-maximal **inhibition** constant (K_d) of 150
 nM when applied to **ROMK1** channels expressed in Xenopus laevis
 oocytes. That the 6-dendrotoxin binding site exists on separate K⁺
 channel classes is shown by its high affinity for two of the voltage-gated
 family of channels, Kv1.1 (K_d < 0.1 nM) and Kv1.6 (K_d = 23 nM). Single
 amino acid substitutions in **ROMK1** indicate that 6-dendrotoxin
 binds to the pore region of **ROMK1** even though it does not
 completely block conduction through the pore. These results suggest that
 dendrotoxins **inhibit** K⁺ channels by recognizing the structurally
 conserved pore region of these channels.
 CC Toxicology - General and methods 22501
 Cytology - Animal 02506
 Biochemistry methods - General 10050
 Biochemistry studies - General 10060
 IT Major Concepts
 Biochemistry and Molecular Biophysics; Methods and Techniques;
 Toxicology
 IT Parts, Structures, & Systems of Organisms
 oocytes: reproductive system
 IT Chemicals & Biochemicals
 cDNA [complementary DNA]: expression, synthesis; delta-dendrotoxin:
 expression, recombinant, toxin, purification; pBluescript plasmid:
 Stratagene, expression vector; pCDNA/Amp plasmid: Invitrogen,
 expression vector; pGEM plasmid: Promega, expression vector;
 Dendroaspis angusticeps venom: analysis, purification, toxin; Kv1.1:
 analysis, voltage-gated channel; **ROMK1**: analysis,
inhibition, pore region, inward rectifier potassium channel
 IT Methods & Equipment
 amino acid analysis: Analysis/Characterization Techniques: CB,
 analytical method; electrophysiological recording:
 Analysis/Characterization Techniques: CT, analytical method; mass
 spectrometry: analytical method, spectroscopic techniques: CB;
peptide sequencing: sequencing method, sequencing techniques;
 reversed-phase HPLC [reversed-phase high performance liquid
 chromatography]: high performance liquid chromatography, purification
 method; C18 reverse-phase column: high performance liquid
 chromatography, purification method; Edman degradation: protein
 sequencing, sequencing method; MonoS FPLC column: Pharmacia, laboratory
 equipment; SDS-PAGE [SDS-polyacrylamide gel electrophoresis]:
 analytical method, gel electrophoresis

L28 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
 AN 1997:329351 CAPLUS
 DN 126:339864
 ED Entered STN: 24 May 1997
 TI Purification, Characterization, and Synthesis of an Inward-Rectifier K+ Channel **Inhibitor** from Scorpion Venom
 AU Lu, Zhe; MacKinnon, Roderick
 CS Department of Neurobiology, Harvard Medical School, Boston, MA, 02115, USA
 SO Biochemistry (1997), 36(23), 6936-6940
 CODEN: BICHAW; ISSN: 0006-2960
 PB American Chemical Society
 DT Journal
 LA English
 CC 4-5 (Toxicology)
 AB We have purified a **peptide inhibitor** of an inward-rectifier K+ channel, **ROMK1**, from the venom of the scorpion *Leiurus quinquestriatus* var. *hebraeus*. The **inhibitor** is Lq2, a previously discovered blocker of voltage- and Ca2+-activated K+ channels. Mutations were made on the channel and the **inhibitor**, and the resulting effects were examined using an electrophysiol. assay. The data show that Lq2 blocks the pore of **ROMK1**, and that the interaction surface on Lq2 is the same for binding to inward-rectifier, voltage-activated, or Ca2+-activated K+ channels. These findings support the notion that different classes of K+ channels have different gates but a similar K+-selective pore structure.
 ST potassium channel **inhibitor** scorpion venom toxin
 IT Toxins
 RL: ADV (Adverse effect, including toxicity); PRP (Properties); BIOL (Biological study)
 (Lq2; purification, characterization, and synthesis of inward-rectifier K+ channel **inhibitor** from scorpion venom)
 IT Potassium channel
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 (**ROMK1**; purification, characterization, and synthesis of inward-rectifier K+ channel **inhibitor** from scorpion venom)
 IT *Leiurus quinquestriatus hebraeus*
 Venoms
 (purification, characterization, and synthesis of inward-rectifier K+ channel **inhibitor** from scorpion venom)
 IT Amino acids, biological studies
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
 (purification, characterization, and synthesis of inward-rectifier K+ channel **inhibitor** from scorpion venom)

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09/243, 054

(FILE 'HOME' ENTERED AT 08:34:57 ON 19 AUG 2004)

FILE 'REGISTRY' ENTERED AT 08:35:11 ON 19 AUG 2004

E (APAMIN)/CN

E APAMIN/CN

L1

1 S E3

L2

6 S CNCNRIIPH[MQ]CWKK/SQSP

FILE 'AGRICOLA, BIOSIS, CA, CANCERLIT, CAPLUS, CHEMCATS, MEDLINE,
TOXCENTER, USPATFULL' ENTERED AT 08:39:50 ON 19 AUG 2004

L3

136 S L2

=>

L1 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2004 ACS on STN
RN 254427-94-6 REGISTRY

SEQ3 1 Ala-Leu-Cys-Asn-Cys-Asn-Arg-Ile-Ile-Ile-
====
11 Pro-His-Gln-Cys-Trp-Lys-Lys-Cys-Gly-Lys-
====
21 Lys
====
HITS AT: 1-21

RELATED SEQUENCES AVAILABLE WITH SEQLINK

L1 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2004 ACS on STN
RN 252258-78-9 REGISTRY

SEQ3 1 Ala-Leu-Cys-Asn-Cys-Asn-Arg-Ile-Ile-Ile-
====
11 Pro-His-Gln-Cys-Trp-Lys-Lys-Cys-Gly-Lys-
====
21 Lys
====
HITS AT: 1-21

L2 ANSWER 1 OF 6 REGISTRY COPYRIGHT 2004 ACS on STN
RN 403843-29-8 REGISTRY

SEQ3 1 Ala-Leu-Cys-Asn-Cys-Asn-Arg-Ile-Ile-Ile-
====
11 Pro-His-Met-Cys-Trp-Lys-Lys-Cys-Gly-Lys-
====
21 Lys

HITS AT: 3-17

RELATED SEQUENCES AVAILABLE WITH SEQLINK

L2 ANSWER 2 OF 6 REGISTRY COPYRIGHT 2004 ACS on STN
RN 254427-94-6 REGISTRY

SEQ3 1 Ala-Leu-Cys-Asn-Cys-Asn-Arg-Ile-Ile-Ile-
====
11 Pro-His-Gln-Cys-Trp-Lys-Lys-Cys-Gly-Lys-
====
21 Lys

HITS AT: 3-17

RELATED SEQUENCES AVAILABLE WITH SEQLINK

L2 ANSWER 3 OF 6 REGISTRY COPYRIGHT 2004 ACS on STN
RN 252258-78-9 REGISTRY

SEQ3 1 Ala-Leu-Cys-Asn-Cys-Asn-Arg-Ile-Ile-Ile-
====
11 Pro-His-Gln-Cys-Trp-Lys-Lys-Cys-Gly-Lys-
====
21 Lys

HITS AT: 3-17

RELATED SEQUENCES AVAILABLE WITH SEQLINK

L2 ANSWER 4 OF 6 REGISTRY COPYRIGHT 2004 ACS on STN
RN 228579-60-0 REGISTRY

SEQ3 1 Ala-Leu-Cys-Asn-Cys-Asn-Arg-Ile-Ile-Ile-
====
11 Pro-His-Met-Cys-Trp-Lys-Lys-Cys-Gly-Lys-
====
21 Lys

HITS AT: 3-17

RELATED SEQUENCES AVAILABLE WITH SEQLINK

L2 ANSWER 5 OF 6 REGISTRY COPYRIGHT 2004 ACS on STN
RN 228579-40-6 REGISTRY

SEQ3 1 Ala-Leu-Cys-Asn-Cys-Asn-Arg-Ile-Ile-Ile-
====
11 Pro-His-Met-Cys-Trp-Lys-Lys-Cys-Gly-Lys-
====
21 Lys

HITS AT: 3-17

RELATED SEQUENCES AVAILABLE WITH SEQLINK

L2 ANSWER 6 OF 6 REGISTRY COPYRIGHT 2004 ACS on STN
RN 58694-52-3 REGISTRY

SEQ3 1 Ala-Leu-Cys-Asn-Cys-Asn-Arg-Ile-Ile-Ile-
====
11 Pro-His-Met-Cys-Trp-Lys-Lys-Cys-Gly-Lys-
====
21 Lys
HITS AT: 3-17

RELATED SEQUENCES AVAILABLE WITH SEQLINK

=>

L4 ANSWER 1 OF 4 REGISTRY COPYRIGHT 2004 ACS on STN
RN 403843-29-8 REGISTRY

SEQ3 1 Ala-Leu-Cys-Asn-Cys-Asn-Arg-Ile-Ile-Ile-
====
11 Pro-His-Met-Cys-Trp-Lys-Lys-Cys-Gly-Lys-
====
21 Lys
====
HITS AT: 1-21

RELATED SEQUENCES AVAILABLE WITH SEQLINK

L4 ANSWER 2 OF 4 REGISTRY COPYRIGHT 2004 ACS on STN
RN 228579-60-0 REGISTRY

SEQ3 1 Ala-Leu-Cys-Asn-Cys-Asn-Arg-Ile-Ile-Ile-
====
11 Pro-His-Met-Cys-Trp-Lys-Lys-Cys-Gly-Lys-
====
21 Lys
====
HITS AT: 1-21

RELATED SEQUENCES AVAILABLE WITH SEQLINK

L4 ANSWER 3 OF 4 REGISTRY COPYRIGHT 2004 ACS on STN
RN 228579-40-6 REGISTRY

SEQ3 1 Ala-Leu-Cys-Asn-Cys-Asn-Arg-Ile-Ile-Ile-
====
11 Pro-His-Met-Cys-Trp-Lys-Lys-Cys-Gly-Lys-
====
21 Lys
====
HITS AT: 1-21

RELATED SEQUENCES AVAILABLE WITH SEQLINK

~~L4 ANSWER 4 OF 4 REGISTRY COPYRIGHT 2004 ACS on STN~~
~~RN 58694-52-3 REGISTRY~~

SEQ3 1 Ala-Leu-Cys-Asn-Cys-Asn-Arg-Ile-Ile-Ile-
====
11 Pro-His-Met-Cys-Trp-Lys-Lys-Cys-Gly-Lys-
====
21 Lys
====
HITS AT: 1-21

RELATED SEQUENCES AVAILABLE WITH SEQLINK

L8 ANSWER 1 OF 3 CA COPYRIGHT 2004 ACS on STN DUPLICATE 1
 AN 139:391382 CA
 TI A method of **treating** or reducing cell death, especially neuronal
 cell death, by administering an ion channel blocking agent
 IN Bartlett, Perry Francis; Coulson, Elizabeth Jane; Morley, Samuel Nicholas;
 Hulett, Sarah Marie
 PA The Walter and Eliza Hall Institute of Medical Research, Australia
 SO PCT Int. Appl., 67 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003094903	A1	20031120	WO 2003-AU580	20030514
	W:				
	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,				
	CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,				
	GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,				
	LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,				
	PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT,				
	TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ,				
	MD, RU, TJ, TM				
	RW:				
	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,				
	CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC,				
	NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ,				
	GW, ML, MR, NE, SN, TD, TG				
PRAI AU	2002-2307	A	20020514		

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 2
AN 1999:636933 CAPLUS
DN 132:32346
TI Synthesis of a Stable Form of Tertiapin: A High-Affinity Inhibitor for
Inward-Rectifier K⁺ Channels
AU Jin, Weili; Lu, Zhe
CS Department of Physiology, University of Pennsylvania, Philadelphia, PA,
19104, USA
SO Biochemistry (1999), 38(43), 14286-14293
CODEN: BICHAW; ISSN: 0006-2960
PB American Chemical Society
DT Journal
LA English
RE.CNT 65 THERE ARE 65 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d 4 hit

L3 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 2
IT **252258-78-9P**
RL: BPR (Biological process); BSU (Biological study, unclassified); BUU
(Biological use, unclassified); SPN (Synthetic preparation); BIOL
(Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(synthesis of a stable form of tertiapin, a high-affinity inhibitor for
inward-rectifier K⁺ channels)

=> d 4 ab

L3 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 2
AB Tertiapin (TPN), a small protein derived from honey bee venom, inhibits
the GIRK1/4 and ROMK1 channels with nanomolar affinities. Methionine
residue 13 in TPN interacts with residue F148 in the channel, located just
outside of the narrow region of the ROMK1 pore. The methionine residue in
TPN can be oxidized by air, which significantly hinders TPN binding to the
channels. To overcome the reduction in TPN affinity due to oxidation of M13,
we replaced M13 in TPN with fourteen different residues. Out of the fourteen
derivs., only the one in which M13 was replaced by glutamine, TPNQ, binds
to the channel with a K_i value very similar to that of native TPN. Since
TPNQ is stable and functionally resembles native TPN, it will be a very
useful mol. probe for studying the inward-rectifier K⁺ channels.

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